

REMARKS

Reconsideration of the Application is requested.

Claim Rejections - 35 USC § 102

"Claims 1-5, 11-15 are rejected under 35 USC 102(e) as being anticipated by Olsen US Patent No. 6,137,479.

Claim 1

The Olsen reference has taught a watch 54 including display means for at least one item of time related data and having an at least partially transparent outer element covering the display means (figures 4 and 5). The Olsen reference has taught a watch including control means for controlling the movement of cursor on a computer screen and touch sensitive sensors are built into the watch to provide the computer mouse functions, i.e., the mouse watch can be used to detect the cursor movement on the display screen 26 (see also column 5, lines 42-67, and column 6, lines 1-34, and the related claims).

The Examiner interprets "the sensitive pads of the touch sensitive sensors are supported at least partially by the outer element: as the sensitive pads of the touch sensitive sensors having at least partial contact with the outer element. I column 6, lines 35-67 and column 7, lines 1-25, it is stated "the programmable computer housing 90 contains the programmable computer components (e.g. the programmable computer 86) ...the programmable computer 86 has a display 104....the computer mouse housing 88 has a saddle 92 for coupling the programmable computer 86 to the computer mouse 84...the programmable computer housing 90 makes physical contact with the computer mouse housing 88." See also figures 6 and 7. Therefore, Olsen teaches that the outer element (i.e. the programmable computer housing 90) covers the display means (i.e. display 104) or forms an outer portion (i.e. the programmable computer housing 90 of figure 7) of these display means (i.e. display 104), and the sensitive pads of the touch sensitive sensors (i.e. motion sensor 104) are supported at least partially by the outer element (i.e. the programmable computer housing 90). As applied to the present application, Olsen fulfills the claims limitation that the outer element covers the display means or forms an outer portion of these display means, and the sensitive pads of the touch sensitive sensors are supported at least partially by the outer element.

The Examiner notes that in column 5, lines 65-67 and column 6, lines 1-13 of Olsen, it is stated "the basic operation and construction of conventional motion sensors are well known and widely used in the computer pointing device art and accordingly, these aspects of the present invention will not be discussed further". Olsen teaches a pressure sensor (or a motion sensor in another embodiment) and a pressure sensor may be constructed by a plurality or an array of (compactly made) sensors in his mouse watch device and therefore Olsen has inherently taught a plurality of sensors in his mouse watch device. Moreover, a pressure sensor (or a motion sensor) that is utilized in a point device acts like a plurality of sensors in functionality. A cursor device such as Olsen may embed a two or three axis pressure sensor in a button conformed to a finger, depending on the type of sensors are used, a pair of which may be used to provide information about two axes of displacement through which the location of an on-screen cursor or pointer is controllable. According to Olsen's teaching, the mouse watch device of Olsen may comprise a relatively high-resolution array of pressure sensors, small switches, or the like.

In column 7, lines 34-49 of Olsen, it is stated "various motions sensors, displays and data transmission techniques may be used..." Therefore, the pressure- or motion-sensitive pointing device 54 may be implemented as having a two-dimensional array of pressure/motion sensors, with each sensor corresponding to a coordinate position on a display screen wherein a finger is dragged across the array of sensors, and the direction of movement of the finger moves a pointer on the display screen in that direction and a button selector is pressed to select an object being pointed to by the pointer or to move a cursor displayed on the display screen to the location of the pointer or a pressure-sensitive selector located below the two-dimensional array of pressure sensors may be used, wherein the pressure-sensitive selector is activated when it is tapped at a pressure above a predetermined value greater than the pressure sensed by the two-dimensional array of pressure sensors. As applied to the present application, Olsen fulfills the claims limitation that the first control means are formed of a plurality of touch sensitive sensors."

Applicant's Response

For a claim to be anticipated, "The identical invention must be shown in as complete detail as is contained in the claim." Richardson v. Suzuki Motor Co., 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). MPEP 2131 (Anticipation)

Claim 1 requires two separate features of the outer element. One is that it be at

least partially transparent for covering the display means. There is no such teaching in the cited reference to Olsen. In figure 4b and 4c, the display 60 is shown through an opening in the case of a mouse watch or being a separate item from the case as is shown by the hatching in figure 5. The one skilled in the art would not perceive this element being present in the reference to Olsen. Secondly, this opinion is supported by a Rule 132 Declaration by a skilled practitioner in the art, Mr. Rolf Klappert.

According to Webster's New World Dictionary, support is defined as "to carry or bear the weight of; keep from falling, slipping or sinking; hold up." Webster's New World Dictionary, Third College Edition, 1994.

Therefore, "sensitive pads are supported at least partially by said outer element: have to be interpreted as being at least partially above the display means (see in particular Figure 7 of the application).

The embodiment depicted in Figures 6 and 7 (see column 6, lines 34-59) concerns a computer mouse 84 and a programmable computer 86 which are placed in separate housings. Computer mouse housing 88 contains the components that perform the traditional mouse functions such as switches 98, a motion sensor 100, and a computer mouse port interface 102. Programmable computer housing 90 contains the programmable computer components such as a display 104 and a keypad 106 along with a processor 108 and a data memory not shown.

Further, the computer mouse housing 88 has a saddle 92 for coupling the programmable computer 86 to the computer mouse 84. Data ports 94 and 96 are provided for sending data between the computer mouse 84 and the programmable computer 86.

In a preferred embodiment, the programmable computer 86 is a watch similar to the watch device discussed above (column 6, lines 54-55). Therefore, it is expectable that the display means 104 are disposed on the upper surface of the programmable computer housing 90 in order to be apparent. Thus, the outer element covering said display means or forming an outer portion of these display means is also disposed on this upper surface of the programmable computer housing.

Contrary to the present invention, the motion sensor 100 for moving a cursor is not on said upper surface of the housing containing the display means. Moreover, said motion sensor 100 of the computer mouse 84 is expected to be some roller ball 42 as represented on Figures 2A and 2B which is placed on the lower surface of the computer mouse

housing 88 and which do not correspond to sensitive pads.

Furthermore, the physical contact made between the programmable computer housing 90 and the computer mouse housing 88 (column 7, lines 8-9) corresponds to the edges of the lower surface of the programmable computer housing 90 and some corresponding compartment of the computer mouse housing 88 (see Figure 7). As explained before, the transparent outer element which covers the display means or forms an outer portion of these display means is clearly not arranged on this edge.

Therefore, the physical contact is not made between "the at least partially transparent outer element which covers the display means or forms an outer portion of these display means" and "the sensitive pads which control the movement of a cursor on a computer screen".

Thus, the 3-level claimed arrangement comprising: the display means covered by a transparent element or having a transparent outer portion; the sensitive pads being supported by said outer element or portion; and said outer element or portion covering the display means and supporting the sensitive pads; is neither disclosed nor suggested in any of the presented embodiments of Olsen.

Finally, Applicant's invention could not be practiced by one skilled in the art by relying on the Olsen reference.

Claim 2

"Claim 2 encompasses the same scope of invention as that of claim 1 except additional claimed limitation of "a watch crystal." The Olsen reference has taught an outer element such as the cover for the watch. Furthermore, any conventional watch would require a cover to protect it from scratches, and the cover could be made from various materials including crystal as an outer element taught by Olsen in figures 4-5."

Applicant's Response

In Claim 2, Applicant claims a watch crystal that supports touch sensitive pads. This feature is neither taught nor suggested by the Olsen reference.

Claim 3

"Claim 3 recites all the limitations of claim 1 or 2 and adds the limitation of "first means is supported by the outer element." The Olsen reference has taught that the first means

is supported by the outer element, i.e. the cover or surface for the watch as shown in figures 4-7.”

Applicant's Response

As discussed above, claim 1 requires that the outer element be transparent and at least partially and to support the touch sensitive sensors. As shown by the dictionary reference and as interpreted by one skilled in the art, this would mean that the touch sensitive sensors be at least partially above the outer element.

In claim 3, the touch sensitive sensors are supported by the outer element. One skilled in the art would not recognize nor be able to identify this invention in the Olsen reference.

Claim 4

“Claim 4 recites all the limitations of claim 1 or 2 and adds the limitation of “a part of sensitive pads is arranged in the top portion of the case.” The Olsen reference has taught in figures 4-7 a cover of watch that protects sensors from scratches.”

Applicant's Response

As discussed above, claim 1 requires that the outer element be transparent and at least partially support the touch sensitive sensors. As shown by the dictionary reference, this would mean that the touch sensitive sensors be at least partially above the outer element.

In claim 4, the touch sensitive sensors are supported by the outer element, and also by the case. One skilled in the art would not recognize nor be able to identify this invention in the Olsen reference. Additionally, claim 4 adds additional features to the invention and should be allowed for at least the same reasons as claim 1 or 2.

Claim 5

“Claim 5 recites all the limitations of claim 1 and adds the limitation of “ sensitive pads arranged in the shape of a matrix.” The Olsen reference has taught a watch with multiple sensors arranged to generate signals to control the position of the cursor on the display screen. The Examiner interprets that an array of multiple sensors can be arranged in the shape of a matrix.”

Applicant's Response

As discussed above, claim 1 requires that the outer element be transparent and at least partially supports the touch sensitive sensors. As shown by the dictionary reference, this

would mean that the touch sensitive sensors be at least partially above the outer element.

In claim 5, the touch sensitive sensors are supported by the outer element. One skilled in the art would not recognize nor be able to identify this invention in the Olsen reference. Additionally, claim 5 adds additional features to the invention and should be allowed for at least the same reasons as claim 1 by the arrangement of the sensors in a matrix.

Claim 8

"Claim 8 recites all the limitations of claim 5 and adds the limitation of "the movement of cursor corresponds to the path taken by the user's finger." The Olsen reference teaches in figures 4-7 the surface area of the watch to generate signals to control the position of the cursor on the display screen. Since the user's finger can move upon the watch's surface area, the path taken by the user's finger corresponds to the cursor's movement across a display screen."

Applicant's Response

Claim 8 depends from claim 5, which depends from independent claim 1 and provides additional features to what applicant regards as his invention and should be allowed for at least the same reasons as claim 1 and 5.

Claim 11

"Claim 11 recites all the limitations of claim 1 and adds the limitation of "second control means." The Olsen reference has taught a second control means such as a trackball being incorporated into the mouse watch device."

Applicant's Response

Claim 11 depends from independent claim 1 and provides additional features to what applicant regards as his invention and should be allowed for at least the same reasons as claim 1.

Claim 12

"Claim 12 recites all the limitations of claim 11 and adds the limitation of "the second control means arranged in the top portion of the case." The Olsen reference has taught the second control means arranged in the top portion of the watch."

Applicant's Response

Claim 12 depends from claim 11 and independent claim 1 and provides additional features to what applicant regards as his invention and should be allowed for at least the same reasons as claim 1.

Claim 13

"Claim 13 recites all the limitations of claim 11 and adds the limitation of "the second control means formed by touch sensitive sensor." The Olsen reference has taught a second control means such as a trackball rotated to move the cursor on the display screen are formed by touch sensitive sensor."

Applicant's Response

Claim 13 depends from claim 11 and independent claim 1 and provides additional features to what applicant regards as his invention and should be allowed for at least the same reasons as claim 1.

Claim 14

"Claim 14 recites all the limitations of claim 11 and adds the limitation of "the second control means arranged in a link of the wristband of the watch." The Olsen reference clearly teaches a second control means arranged in a link of the wristband of the watch."

Applicant's Response

It appears that claims 14 and 15 were transposed in the Official Action. Applicant assumes that claim 14 was meant.

Claim 14 depends from claim 11 and independent claim 1 and provides additional features to what applicant regards as his invention and should be allowed for at least the same reasons as claim 1.

Claim 15

"Claim 15 recites all the limitations of claim 11 and adds the limitation of "second control means formed by a push-button." The Olsen reference has taught a second control means formed by a push-button."

Applicant's Response

It appears that claims 14 and 15 were transposed in the Official Action. Applicant

assumes that claim 15 was meant.

Claim 15 depends from claim 11 and independent claim 1 and provides additional features to what applicant regards as his invention and should be allowed for at least the same reasons as claim 1.

Claim 16

"Claim 16 recites all the limitations of claim 11 and adds the limitation of " second control means formed by a pressure sensor." The Olsen reference has taught a second control means such as a trackball formed by a pressure sensor."

Applicant's Response

Claim 16 depends from claim 11 and independent claim 1 and provides additional features to what applicant regards as his invention and should be allowed for at least the same reasons as claim 1.

Claim Rejections - 35 USC § 103

"Claim 6 is rejected under 35 USC 103(a) as unpatentable over Olsen et al. US Patent No. 6,137,479 in view of Teres et al US Patent No. 6,184,871.

Claim 6 recites all the limitations of claim 5 and adds the limitation of "means for detecting the actuation frequency of successive sensors." The Olsen reference teaches in figures 4-5 a watch 54 as a pointing device having a display and controls like a conventional watch and a person wears it like a conventional watch. Sensors are built into the watch to provide the computer mouse functions. However, Olsen is silent on means for detecting the actuation frequency of successive sensors.

The Teres reference teaches a watch with means for detecting the activated sensor representing the greatest variation of electrical quantity comprising conversion means of the total capacity of the set of the fixed capacitor and the parasite capacitor of each capacitive sensor A to S into an output signal having a frequency proportional to this capacity (column 3, lines 24-37).

It would have been obvious to one having ordinary skill in the art at the time of the invention was made to have incorporated the means for detecting the actuation frequency of successive sensors of Teres's watch device in the watch device of Olsen to generate signals

for the control of a cursor on a display screen in accordance to the fingertip's movement speed. One having the ordinary skill in the art would have been motivated to do this to considerably simplify the process of identifying a manual action on a surface formed by a finger."

Applicant's Response

Applicant respectfully disagrees with the Examiner's interpretation of column 3, lines 24-27 of the reference to Teres et al..

Claim 6 includes all the limitations of claims 5 and 1 and describes an outer element that has a touch sensitive sensors. One of the unique features of Applicant's invention that is claimed in claim 6, is the ability to detect the speed of a user's finger over said outer element, or the actuation frequencies of successor sensors.

Teres et al. only teach the operation of capacity sensors in columns 3, lines 24-27 and there are no suggestions of detecting the rate of the user's finger over the outer element. Thus, claim 6 is distinguishable over the combination of Olsen and Teres.

Claim Rejections - 35 USC § 103

"Claim 7 is rejected under 35 USC 103(a) as unpatentable over Olsen et al. US Patent No. 6,137,479 in view of Teres et al US Patent No. 6,184,871, and further in view of Ferrari et al US Patent No. 6,392,636.

Claim 7 recites all the limitations of claim 6 and adds the limitation of "the ratio between the movement of cursor and the path." Olsen in view of Teres teaches all the limitations of claim 6. However, the references are silent on the additional limitation as recited in claim 7.

Ferrari teaches a portable device having a display screen by providing an electrical output signal for selectively controlling movement of a cursor across the display screen. Ferrari further teaches capacitive sensing cells arranged in a row/column array top to produce output signals for control of cursor movement in both a row direction and an orthogonal column direction. Ferrari also teaches the horizontal and vertical direction such as the two X and Y array outputs being proportional to the zero and first moment of the 2-D pattern (column 11, lines 32-41 of the Ferrari reference). Therefore, Ferrari has taught that ratio between the movement of cursor and the path taken by a user's finger across an outer element is less at low speed or actuation frequency than at relatively high speed or actuation

frequency.

It would have been obvious to one having ordinary skill in the art at the time of the invention was made to have incorporated the additional means of cursor movement of Ferrari in the watch device of Olsen in view of Teres to control a cursor on a display screen in accordance to the fingertip's movement speed. One having the ordinary skill in the art would have been motivated to do this to provide a more sensitive or high precision control to the cursor movement across a display screen."

Applicant's Response

Applicant has distinguished his invention over the combination of Olsen and Teres. The addition of the reference to Ferrari, thus, would not achieve the device claimed by claim 7.

Claim Rejections - 35 USC § 103

"Claims 9-10 are rejected under 35 USC 103(a) as being unpatentable over Olsen et al. US Patent No. 6,137,479 in view of Teres et al US Patent No. 6,184,871.

Claims 9-10 recites all the limitations of claim 1 and adds the limitation of "concentric zones." Olsen discloses a mouse watch with cursor movements as claimed. See figures 4-5 and respective portions of the specification. However, it is silent on the concentric zones, although the mouse watch could have made of an array of sensors forming concentric zones.

Teres et al. teaches a wristwatch device having concentric zones as shown in figure 3.

It would have been obvious to one having ordinary skill in the art at the time of the invention was made to have incorporated an array of sensors forming the concentric zones as taught by Teres in the wristwatch device of Olsen to control a cursor on a display screen relative to the mid-position on the top surface of the watch's display. One having the ordinary skill in the art would have been motivated to do this to provide two different touch-sensitive zones for high precision cursor control."

Applicant's Response

Applicant has previously distinguished the uniqueness of his invention over the references of Olsen and Teres. Claim 9 provides additional features of his invention that is neither taught nor suggested by the reference to Olsen and Teres. The same is true for claim 10.

Claim Rejections - 35 USC § 103

"Claim 17 is rejected under 35 USC 103(a) as being unpatentable over Olsen et al US Patent No. 6,137,479.

Claim 17 recites all the limitations of claim 16 and adds the limitation of "pressure sensor formed by a piezoelectric crystal." Olsen discloses a mouse watch as claimed. See figures 4-5 and respective portions of the specification. However, it is silent on "pressure sensor formed by piezoelectric crystal".

It would have been obvious to one having ordinary skill in the art at the time of the invention was made to have incorporated a piezoelectric crystal in the pressure sensors of Olsen since any conventional watch would require a cover to protect it from scratches, and the cover could be made from various materials including a piezoelectric crystal as an outer element taught by Olsen in figure 4.

One having the ordinary skill in the art would have been motivated to do this to provide reasonable light and/or semi-transparent material such as a piezoelectric crystal as the cover of the watch for protection of the sensors inside the portable watch device."

Applicant's Response

Claim 17 depends from claim 16 which depends from claim 1. Claim 17 provides additional features of the embodiments of claim 16, 11, and 1, and should be allowed.

Claim Rejections - 35 USC § 103

"Claim 18 is rejected under 35 USC 103(a) as being unpatentable over Olsen US Patent No. 6,137,479, in view of Teres US Patent No. 6,184,871.

Claim 18 recites all the limitations of claim 11 and adds the limitation of "second control means formed by micro-contactor". Olsen discloses a mouse watch as claimed. See figures 4-5 and respective portions of the specification. However, it is silent on "second control means formed by micro-contactor or small travel contactor."

The Teres reference teaches a second control means such as push buttons or any other new control devices that may be replaced by other sensors (column 5, lines 4-16).

It would have been obvious to one having ordinary skill in the art at the time of the invention was made to have incorporated second control means formed by other sensors such as a micro-contactor or small travel contactor of Teres in the portable watch device of Olsen because the construction of minuet sensors formed by micro-contactor or small travel

contactor are well known and widely used in the computer pointing device art. One having the ordinary skill in the art would have been motivated to do this to provide additional control means for the portable watch device.”

Applicant's Response

Claim 18 depends from claim 17, which depends from claim 16, which depends from claim 1. Claim 18 provides additional features of the embodiments of claim 17, 16, 11, and 1, and should be allowed.

Conclusion

Applicant has amended the claims to correct for minor grammatical errors and oversights. Additionally, Applicant has shown that the reference to Olsen is not anticipatory to Applicant's claims as is supported by one skilled in the art.

Applicant has also provided the commonly accepted definition of the verb "support" and shows that the definition would require that the elements, the touch sensors, be at least partially transparent above the outer element.

Applicant has provided a Declaration by one skilled in the art showing that the reference to Olsen would not allow one to practice the invention, it is not enabling, does not teach the invention, and all of the elements of the claim are not present, as was discussed above.

Applicant respectfully requests that this amendment be entered and the claims be allowed so that a patent may issue.

Respectfully submitted,

Date: May 27, 2003



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